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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/651,508	08/30/2000	Douglas G. Walker	79874DMW	9995

1333 7590 01/19/2005

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EXAMINER	
NGUYEN, MADELEINE ANH VINH	
ART UNIT	**PAPER NUMBER**
2626	

DATE MAILED: 01/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/651,508	WALKER ET AL.	
	Examiner	Art Unit	
	Madeleine AV Nguyen	2626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 July 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *21-51* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *27-35* is/are allowed.

6)☒ Claim(s) *21,22,25,26 and 36-51* is/are rejected.

7)☒ Claim(s) *23 and 24* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

This communication is responsive to amendment filed on July 26, 2004.

Applicant cancels claims 1-20, and adds new claims 21-51.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 21, 22, 25, 26, 36, 38-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kumada et al (US Patent No. 6,643,029).

Concerning claim 21, Kumada teaches a method comprising the steps of obtaining a source device to profile connection space transform and a destination device to profile connection space transform; combining the source device to profile connection space transform and the destination device to profile connection space transform; operating the combined transform thereby forming a modified file; and outputting the modified file to the destination device.

Concerning claims 22, 25, 26, Kumada further teaches that the step of combining modifies the source device to profile connection space transform with a source to destination gamut mapping transform (color matching processing in Fig.2); the file is a digital file; the file is displayed by the destination device (monitor).

Concerning claims 40, 41, Kumada discloses a system (Fig.1) comprising a source device (input device 117); a destination device (output device 118); a storage medium (ROM 112; col. 7, lines 42-46) having programming instructions stored therein for obtaining connection space transforms for each of the source device and destination device; a transform source having a source device to profile connection space transform (A to B) and a destination device to profile connection space transform (B to A), (Fig.6); and a computer adapted to combine the source device to profile connection space transform (A to B) and the destination device to profile connection space transform (B to A); wherein the computer is further adapted to utilize the combined transform to convert at least one color that is input from a source device (input device 117, Fig.1) to a color that is output to a destination device (output device 118, Fig.1); (Figs.2, 5, 6; Abstract; col. 8, lines 47-66; col. 9, line 36 – col. 10, line 57).

Kumada does not directly teach that the computer combine the source device to profile connection space transform and the destination device to profile connection space transform so as to produce a device to device transform. However, from Figs.5-6, a monitor profile 42 (input profile) is read out by the input profile reader 2, transform source "A to B" information 43 from the monitor is set in the CMM1, a printer profile 43 (output profile) is read out by the output profile reader 3 and transform destination "B to A" information 46 from the printer profile is set in the CMM1. Monitor RGB data is converted to XYZ data (PCS data) based upon the "A to B" information 43 at step S10. This XYZ data is then converted to printer CMYK data based upon the "B to A" information 46 at step S20. Thus, in CMM1, the monitor RGB data is converted to printer CMYK data by combining "A to B" information 43 and "B to A" information 46. In other words, the "A to B" information 43 is combined with the "B to A" information 46 in order

to convert at least one color that is input from a source device (monitor) to a color that is output to a destination device (printer). It would have been obvious to one skilled in the art at the time the invention was made to consider the combination of a transform source "A to B" information and a transform destination "B to A" information in Kumada produces a device to device transform since it converts at least one color that is input from a source device (e.g. monitor) to a color that is output to a destination device (e.g. printer).

Concerning claims 41, 43-50, the computer maps colors from a source device to a destination device using the combined transform of the transform source "A to B" and the transform destination "B to A", (Fig.6; col. 9, line 36 – col. 10, line 57); the data input device receives a digital image from the source device and the data output device sends a digital image to the destination device (Fig.7; col. 9, lines 4-6; col. 11, line 66 – col. 12, line 12); the storage medium contains programming instructions for outputting the transformed digital image to the destination device (claim 44); the source device is a digital imaging device (host computer, digital camera), a scanner (col. 7, lines 47-50), a camera (col. 7, lines 47-50), a display (monitor RGB), (claims 45-48); the destination is a printer (col. 7, lines 50-52), a display (monitor), (claims 49-50).

Claims 36, 39, 51 are method claims of apparatus claim 40. Claims 36, 39, 51 are rejected for the same rationales set forth in claim 40.

Concerning claim 38, Kumada further teaches that the mapping is chosen to preserve existing inter-relationships between source device code values (col. 14, line 63 – col. 15, line 28).

3. Claim 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kumada as applied to claim 36 above, and further in view of Kumada (US Patent No. 6,459,436).

Concerning claim 37, Kumada fails to teach that the mapping corrects for differences in viewing conditions corresponding to the PCS of the source transform and those of the PCS values of the destination transform. In another reference, Kumada teaches a mapping between the source device to profile connection space transform and the destination device to profile connection space transform (Fig.1) wherein the mapping corrects for differences viewing conditions corresponding to the PCS of the source transform and those of the PCS values of the destination transform (Figs.3, 19; Abstract; col. 7, line 57 – col. 8, line 11; col. 18, line 60 – col. 19, line 8). It would have been obvious to one skilled in the art at the time the invention was made to combine the teaching of Kumada in the reference "436" to reference "029" since they are both from the same inventor and same field of endeavor so that the purpose discloses by reference "436" would have been recognized in the pertinent art of reference "029".

Allowable Subject Matter

4. Claims 23, 24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is an Examiner's Statement of Reasons for Allowance: Claims 23-24 are objected over the prior art of record because the Examiner found neither prior art cited in its entirety, nor based on the prior art, found any motivation to combine any of the said prior art which teaches a

method as claimed in claim 21 wherein the combining step combines the destination device to profile connection space transform with an inking manifold matching input dimensions of the destination device to profile connection space transform with output dimensions of the destination device to profile connection space transform.

The following is an Examiner's statement of reasons for the indication of allowable subject matter:

1. Claims 27-35 are allowable.

2. The following is an Examiner's Statement of Reasons for Allowance:

Claims 27-31 are allowable over the prior art of record because the Examiner found neither prior art cited in its entirety, nor based on the prior art, found any motivation to combine any of the said prior art which teaches a method of creating a composite transformation converting a color in a source space into a color in a destination space using [device>PCS] transformation for a source and destination device comprising the steps of modifying a domain of the [device>PCS] transform from a destination device profile with an ink manifold producing a modified [device>PCS] transform with three input dimensions; inventing the modified destination [device >PCS] transform using values in the modified source transform to produce a [device>device] transform; modifying a range of the [device>device] transform by applying the inking manifold transform to yield coordinates in the domain of the destination device thereby producing a modified [device>device] transform.

Claims 32-33 are allowable over the prior art of record because the Examiner found neither prior art cited in its entirety, nor based on the prior art, found any motivation to combine any of the said prior art which teaches a method of creating a composite transformation

converting a color in a source space into a color in a destination space using [device>PCS] transformation for a source and destination device comprising the steps of modifying a domain of the [device>PCS] where colors are within the range of the [device B>PCS] transform and account for non-colorimetric requirements; modifying a [device B>PCS] making the [device B>PCS] invertible by adding additional output channels and adding equivalent output channels to the [device A>PCS] transform; forming a inverted [device B>PCS] transform; producing a modified [device>device] transform.

Claim 34 is allowable over the prior art of record because the Examiner found neither prior art cited in its entirety, nor based on the prior art, found any motivation to combine any of the said prior art which teaches a method of creating a composite transformation converting a color in a source space into a color in a destination space using [device>PCS] transformation for a source and destination device comprising the steps of modifying a destination [device>PCS] transform having a destination device color space to have a unique inverse producing a modified destination [device>PCS] transform; modifying a source [device>PCS] transform to have a range contained in a range of the modified destination [device>PCS] transform; inverting the modified destination [device>PCS] transform for each value in the modified source [device>PCS] transform thereby forming a [device>device] transform.

Claim 35 is allowable over the prior art of record because the Examiner found neither prior art cited in its entirety, nor based on the prior art, found any motivation to combine any of the said prior art which teaches a method of creating a composite transformation converting a color in a source space into a color in a destination space using [device>PCS] transformation for a source and destination device comprising the steps of obtaining [device>PCS] transformations

for a source and destination device each having multi-dimensional interpolation tables and obtaining user preference information extracted from the profiles; modifying a domain of the [device>PCS] transform from a destination device profile with an ink manifold transform, thereby producing three input dimensions that are used to produce a modified [device>PCS] transform, where the inking manifold controls gray component replacement; modifying a range of the [device>PCS] transform from a source device profile such that the PCS coordinates are all within the range of the modified [device>PCS] transform and are responsive to user preference gamut mapping information; inverting the modified [device>PCS] transform to produce a [device>device] transform.

Any comments considered necessary by applicant must be submitted no later than the payment of the Issue Fee and, to avoid processing delays, should preferably accompany the Issue Fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Madeleine AV Nguyen whose telephone number is 703 305-4860. The examiner can normally be reached on 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kimberly A Williams can be reached on 703 305-4863. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Madeleine AV Nguyen
Primary Examiner
Art Unit 2626

January 14, 2005